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EXAMINER
WANG, JIN CHENG

ART UNIT	PAPER NUMBER
2672	

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>30 August 2004 and 18 November 2004</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed 08/30/2004 has been entered. Claims 1 and 10 have

been amended. Claims 23-24 have been newly added. Claims 1-24 are pending in the

application.

Response to Arguments

Applicant's arguments with respect to claims 1-24 have been considered but are moot in

view of the new ground(s) of rejection based on Echerer et al. U.S. Pat. No. 5,740,267

(hereinafter Echerer) in view of Fenster et al. U.S. Pat. No. 6,461,298 (hereinafter Fenster). As

set forth in the subsequent rejection, the Echerer and Fenster combination teaches the claim

limitations of the amended claim 1 and similar claims.

For example, Fenster teaches the claim limitation of "enabling the generation of the

plurality of different measurement graphics using only said mouse without activation of menus,

toolbars and control panels" and "providing a menu-less graphical interface for displaying,

essentially unobstructed, said medical image in a substantial portion of said graphical interface."

This is because Fenster discloses in column 19 and 4 that the user can use the graphical input

device 38 such as a single button mouse to measure distances and areas of the three-dimensional

image within the most recently moved image plane and the user simply needs to use the

graphical input device 38 to indicate the two end points over which the distance is to be

measured if the user wishes to measure a distance and the user must identify at least three points

if an area is to be measured and the placement of points on the image is done by moving a cursor

and the display module 92 connects adjacent points by straight line segments and computes both

the overall line length and the area bounded by the lines joining the points using an appropriate

scale. **In this setting, only a mouse has been placed on the points of the image to measure a**

distance or an area without activation of menus, toolbars and control panels.

It would have been obvious to one of ordinary skill in the art to have incorporated the

Fenster's measurement method into Echerer's method of processing cursored user interaction

because Echerer implicitly suggests providing a menu-less graphical interface for display said

medical image (e.g., Echerer column 12, lines 20-30; column 13, lines 25-50) and providing a

predefined interaction with said medical image, wherein said interaction is selected from a group

of predefined interactions based on said status of each of said at least one button during the

interval between multiple said position detection steps (e.g., Echerer column 16, lines 15-67;

column 17, lines 1-67; column 18, lines 1-64) therefore suggesting an obvious modification of

the Echerer's method for processing a radiograph. One having the ordinary skill in the art would

have been motivated to do this because it would have provided an alternative drawing option that

does not rely on the menus, control panels and toolbars for GUI control (Fenster column 4 and

19).

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

2.   Claim 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Echerer et al.

U.S. Pat. No. 5,740,267 (hereinafter Echerer) in view of Fenster et al. U.S. Pat. No. 6,461,298

(hereinafter Fenster).

3.   Re Claims 1, 23-24:

(a) Echerer teaches a method for providing and processing a cursored user interaction

(column 8, lines 37-67, column 9, lines 1-23) with a spatially displayed medical image (column

7, lines 21-29) and producing graphics related data on said medical image (column 12, lines 42-

56), wherein said method comprises the steps of:

Controlling a mouse computer interface device, having at least one button (e.g., column

12, lines 20-30; column 13, lines 25-50);

Displaying a pointer symbol on said graphical interface, wherein said pointer symbol

(e.g., a cursor) represents a current position of said mouse on said graphical interface (e.g.,

column 8, lines 35-55; column 12, lines 20-30; column 13, lines 25-50);

Tracking a status of each of said at least one button (e.g., column 12, lines 20-30; column

13, lines 25-50);

Detecting a position of said mouse, wherein said position detection step is activated upon

actuation of one of said at least one button (e.g., column 12, lines 20-30; column 13, lines 25-50;

column 15, lines 15-35); and

Generating one of a plurality of measurement graphics related to a predefined set of

measurement operations on said medical image upon at least one actuation of said at least one

button (*herein only mouse is being used instead of the user interface constructs such as ACTION*

BARS or SCROLLABLE PANEL AREAS; see e.g., column 12, lines 20-30; column 13, lines 25-

50; column 15, lines 15-35).

Enabling the generation of the plurality of different measurement graphics using said

mouse without activation of toolbars and control panels (e.g., column 12, lines 20-30; column

13, lines 25-50; column 15, lines 15-35).

In other words, Echerer further discloses enabling the generation of the measurement

graphics without without activation of ACTION BARS or image fields, OR CONTROL PANELS

since Echerer teaches using a mouse only without activating ACTION BARS or image fields, OR

CONTROL PANELS (See e.g., column 12, lines 20-30; column 13, lines 25-50; column 15, lines

15-35).

(b) However Echerer is silent to "Enabling the generation of the plurality of different

measurement graphics using only said mouse without activation of menus, toolbars and control

panels" and "providing a menu-less graphical interface for displaying, essentially unobstructed,

said medical image in a substantial portion of said graphical interface."

(c) Fenster teaches the claim limitation of "enabling the generation of the plurality of

different measurement graphics using only said mouse without activation of menus, toolbars and

control panels" and "providing a menu-less graphical interface for displaying, essentially

unobstructed, said medical image in a substantial portion of said graphical interface" (*This is*

because Fenster discloses in column 19 and 4 that the user can use the graphical input device 38

such as a single button mouse to measure distances and areas of the three-dimensional image

within the most recently moved image plane and the user simply needs to use the graphical input

device 38 to indicate the two end points over which the distance is to be measured if the user

wishes to measure a distance and the user must identify at least three points if an area is to be

measured and the placement of points on the image is done by moving a cursor and the display

module 92 connects adjacent points by straight line segments and computes both the overall line

length and the area bounded by the lines joining the points using an appropriate scale. In this

setting, only a mouse has been placed on the points of the image to measure a distance or an

area without activation of menus, toolbars and control panels. Fenster also teaches similar

claim limitations set forth in the claims 23-24).

(d) It would have been obvious to one of ordinary skill in the art to have incorporated the

Fenster's measurement method into Echerer's method of processing cursored user interaction

because Echerer implicitly suggests providing a menu-less graphical interface for display said

medical image (e.g., Echerer column 12, lines 20-30; column 13, lines 25-50) and providing a

predefined interaction with said medical image, wherein said interaction is selected from a group

of predefined interactions based on said status of each of said at least one button during the

interval between multiple said position detection steps (e.g., Echerer column 16, lines 15-67;

column 17, lines 1-67; column 18, lines 1-64) therefore suggesting an obvious modification of

the Echerer's method for processing a radiograph.

(e) One having the ordinary skill in the art would have been motivated to do this because it would have provided an alternative drawing option that does not rely on the menus, control panels and toolbars for GUI control (Fenster column 4 and 19).

Claim 2:

The claim 2 encompasses the same scope of invention as that of claim 1 except additional claimed limitation that a single-point actuating/positioning assigns an actual pixel position and/or a pixel intensity quantity to the point in question. However, Echerer and Fenster further disclose the claimed limitation that a single-point actuating/positioning assigns an actual pixel position and/or a pixel intensity quantity to the point in question (e.g., Echerer column 12, lines 42-56; Fenster column 19).

Claim 3:

The claim 3 encompasses the same scope of invention as that of claim 1 except additional claimed limitation that a point pair actuating/positioning assigns a distance value to the pair in question. However, Echerer further discloses the claimed limitation that a point pair actuating/positioning assigns a distance value to the pair in question (e.g., column 13, lines 12-49, column 15, lines 9-11).

Claim 4:

The claim 4 encompasses the same scope of invention as that of claim 1 except additional claimed limitation that a triple-point actuating/positioning assigns an angle value quantity to a middle point of the triple. However, Echerer further discloses the claimed limitation that a triple-

point actuating/positioning assigns an angle value quantity to a middle point of the triple (column 15, lines 12-19).

4.   Claim 5:

The claim 5 encompasses the same scope of invention as that of claim 1 except additional claimed limitation that "multiple-point actuating/positioning for an open or closed point sequence assigns an area value quantity to a concave region delimited by the sequence in question". However, Fenster further discloses the claim limitation of multiple-point actuating/positioning for an open or closed point sequence assigns an area value quantity to a concave region delimited by the sequence in question (*This is because Fenster discloses in column 19 and 4 that the user can use the graphical input device 38 such as a single button mouse to measure distances and areas of the three-dimensional image within the most recently moved image plane and the user simply needs to use the graphical input device 38 to indicate the two end points over which the distance is to be measured if the user wishes to measure a distance and the user must identify at least three points if an area is to be measured and the placement of points on the image is done by moving a cursor and the display module 92 connects adjacent points by straight line segments and computes both the overall line length and the area bounded by the lines joining the points using an appropriate scale*).

5.   Claim 6:

The claim 6 encompasses the same scope of invention as that of claim 1 except additional claimed limitation that "a freehand-drawn actuating/positioning for an open or closed point

sequence assigns an area value quantity to a concave region delimited by the sequence in question". However, Fenster further discloses the claim limitation of a freehand-drawn actuating/positioning for an open or closed point sequence assigns an area value quantity to a concave region delimited by the sequence in question (*This is because Fenster discloses in column 19 and 4 that the user can use the graphical input device 38 such as a single button mouse to measure distances and areas of the three-dimensional image within the most recently moved image plane and the user simply needs to use the graphical input device 38 to indicate the two end points over which the distance is to be measured if the user wishes to measure a distance and the user must identify at least three points if an area is to be measured and the placement of points on the image is done by moving a cursor and the display module 92 connects adjacent points by straight line segments and computes both the overall line length and the area bounded by the lines joining the points using an appropriate scale*).

6.   Claim 7:

The claim 7 encompasses the same scope of invention as that of claim 1 except additional claimed limitation of "a multiple-point actuating/positioning for an open or closed point sequence assigns a poly-line measurement quantity to the sequence so drawn". However, Fenster further discloses the claim limitation of a multiple-point actuating/positioning for an open or closed point sequence assigns a poly-line measurement quantity to the sequence so drawn (*This is because Fenster discloses in column 19 and 4 that the user can use the graphical input device 38 such as a single button mouse to measure distances and areas of the three-dimensional image within the most recently moved image plane and the user simply needs to use the graphical input device 38 to indicate the two end points over which the distance is to be*

measured if the user wishes to measure a distance and the user must identify at least three points

if an area is to be measured and the placement of points on the image is done by moving a cursor

and the display module 92 connects adjacent points by straight line segments and computes both

the overall line length and the area bounded by the lines joining the points using an appropriate

scale).

7.   Claim 8:

The claim 8 encompasses the same scope of invention as that of claim 1 except additional

claimed limitation of "for an open or closed point sequence assigns a poly-line measurement

quantity to the sequence so drawn". However, Fenster further discloses the claim limitation of a

freehand-drawn actuating/positioning for an open or closed point sequence assigns a poly-line

measurement quantity to the sequence so drawn (*This is because Fenster discloses in column 19*

and 4 that the user can use the graphical input device 38 such as a single button mouse to

measure distances and areas of the three-dimensional image within the most recently moved

image plane and the user simply needs to use the graphical input device 38 to indicate the two

end points over which the distance is to be measured if the user wishes to measure a distance

and the user must identify at least three points if an area is to be measured and the placement of

points on the image is done by moving a cursor and the display module 92 connects adjacent

points by straight line segments and computes both the overall line length and the area bounded

by the lines joining the points using an appropriate scale).

8.   Claim 9:

The claim 9 encompasses the same scope of invention as that of any of Claims 2 to 8

except additional claimed limitation of assigning a pixel staticizing to an assigned geometrical

entity. However, Echerer further discloses the claimed limitation of assigning a pixel staticizing

to an assigned geometrical entity (column 9, lines 1-23, column 15, lines 9-11).

9.   Claims 10-13:

The claim 10, 11, 12, 13 encompasses the same scope of invention as that of claim 1, 2,

3, 4 respectively except additional claimed limitation of "an apparatus". However, Echerer

further discloses the claimed limitation of "an apparatus" (column 5, lines 12-37).

10.   Claims 14-18:

The claim 14, 15, 16, 17, 18 encompasses the same scope of invention as that of claim 5,

6, 7, 8, 9 except additional claimed limitation of "an apparatus". However, Echerer further

discloses the claimed limitation of "an apparatus" (column 5, lines 12-37).

Claim 19:

The claim 19 encompasses the same scope of invention as that of claim 1 except

additional claimed limitation of a machine-readable computer program. However, Echerer

further discloses the claimed limitation of "a machine-readable computer program (column 9,

lines 30-36, figures 6-9).

11.   Claim 20:

The claim 20 encompasses the same scope of invention as that of claim 1 except

additional claimed limitation of the step of enabling the generation of the measurement graphic

based solely on actuation of said at least one button of said mouse when said pointer symbol is

situated on said medical image.

However, Fenster further discloses the claim limitation of the step of enabling the

generation of the measurement graphic based solely on actuation of said at least one button of

said mouse when said pointer symbol is situated on said medical image (e.g., creating new

measurement graphic by manipulating and altering the existing measurement graphic using

mouse clicking; Fenster column 19).

12.   Claim 21:

The claim 21 encompasses the same scope of invention as that of claim 1 except

additional claimed limitation of the step of enabling the generation of the measurement graphic

without requiring a user to define a type of graphic being generated.

However, Fenster further discloses the claim limitation of the step of enabling the

generation of the measurement graphic without requiring a user to define a type of graphic being

generated (*This is because Fenster discloses in column 19 and 4 that the user can use the*

graphical input device 38 such as a single button mouse to measure distances and areas of the

three-dimensional image within the most recently moved image plane and the user simply needs

to use the graphical input device 38 to indicate the two end points over which the distance is to

be measured if the user wishes to measure a distance and the user must identify at least three

points if an area is to be measured and the placement of points on the image is done by moving a

cursor and the display module 92 connects adjacent points by straight line segments and

computes both the overall line length and the area bounded by the lines joining the points using

an appropriate scale).

13.   Claim 22:

The claim 22 encompasses the same scope of invention as that of claim 1 except

additional claimed limitation of the measurement graphic being generated without movement of

said pointer symbol associated with said mouse outside of said medical image.

However, Fenster further discloses the claim limitation of the measurement graphic being

generated without movement of said pointer symbol associated with said mouse outside of said

medical image (*This is because Fenster discloses in column 19 and 4 that the user can use the*

graphical input device 38 such as a single button mouse to measure distances and areas of the

three-dimensional image within the most recently moved image plane and the user simply needs

to use the graphical input device 38 to indicate the two end points over which the distance is to

be measured if the user wishes to measure a distance and the user must identify at least three

points if an area is to be measured and the placement of points on the image is done by moving a

cursor and the display module 92 connects adjacent points by straight line segments and

computes both the overall line length and the area bounded by the lines joining the points using

an appropriate scale).

Conclusion

14.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jin-Cheng Wang whose telephone number is (703) 605-1213.

The examiner can normally be reached on 8:00 - 6:30 (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Mike Razavi can be reached on (703) 305-4713. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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